



Escondido/San Marcos

CENTRO CHRISTIANO

TRAFFIC IMPACT STUDY

MUP 02-002

Log No. 02-08-001

DANIEL

BENSON



ASSOCIATES

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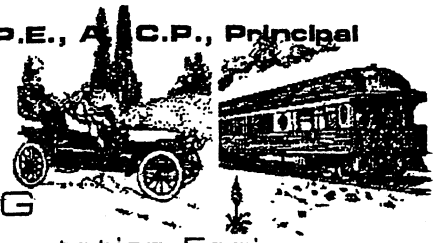
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October 2003 Update

**Daniel
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&
Associates**

Daniel E. Benson, P.E., A.C.P., Principal
PARKING
TRAFFIC
TRANSIT
RIDESHARING
Forensic Transportation Engineer
Microcomputer Applications



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Engineering Design Group
2121 Montiel Road
San Marcos, CA 92069
Attn: Mr. Donald Sprankles, P.E.

October 7, 2003

Re: SD Co Church Focused Traffic Rept MUP02-002-WN6614
Centro Christiano, Calavo & Deodar Log No. 02-08-001

Dear Mr. Sprankles:

With reference to our recent discussions and pursuant to your request, *Daniel Benson & Associates* is pleased to submit this report on our professional transportation engineering services relative to the Escondido/San Marcos area Centro Christiano Church Focused Traffic Impact Analysis, in order to determine the traffic impact of building a church in the hilly, semi-rural Escondido/San Marcos area of San Diego County, just a few blocks northwest of the I-15/SR-78 interchange. According to the proposed site plan, the building will access Calavo Drive between Nordahl Road and Deodar Drive, a block south of Rock Springs Road, and provide parking spaces, exceeding the zoning ordinance requirement. The parcel is now vacant and underdeveloped. Two new buildings will be constructed, including a Sanctuary that has a capacity of 288 fixed seats and a Fellowship Hall and Sunday School. As a result of the proposed project, the County of San Diego has requested a focused traffic study of potential traffic impacts on access roadways, circulation, and nearby streets.

Findings

In summary, our Traffic Impact Analysis shows that existing traffic volumes at the Calavo Drive intersections with the Church driveway, Deodar Drive, and Nordahl Road in Escondido/San Marcos are minimal and Calavo and Deodar will continue to operate at Level of Service A. During the PM peak hour from 5:30 to 6:30 PM, our counts showed that only 32 vehicles operated in either direction on Deodar and 11 vehicles used Calavo past the proposed church driveway. These two-lane streets have limited paved capacity but will not be significantly impacted by the development, with continued operation at Level of Service A after completion, considering the community growth in this hilly area is expected to be limited to five percent, with no developments anticipated, other than a few new custom houses. Using the standard ratio of Average Daily Traffic (ADT) to peak hour volumes of 10, existing ADT is estimated to be 320 on Deodar and 110 on Calavo, not too different from the County's extrapolation of 212 (Mar 22 letter).

Calavo Drive and Deodar southeast of Calavo have 24 foot pavement, including a foot of shoulder on each side and several feet of dirt shoulder on the northwest (downhill) side of Calavo. Both are non-Circulation Element public roads. Northwest Deodar is 30 feet wide (with two lanes) approaching the intersection. There is a double-double yellow line on southwest bound Calavo at Deodar, providing a 90 degree stop sign approach. Deodar does not stop and neither roadway has speed limit signing, but traffic is flowing at 25 to 35 mph on both streets, partly due to several low rises and drops on Calavo. Pavement condition is good.

Based on the current distribution of trips, maximum future PM peak hour volume counts will increase by 5 percent to 335 on Deodar and 115 on Calavo (or 223 based on the County's extrapolation). Our investigation of other development activity showed that there are no other significant projects in the vicinity that could affect traffic near the proposed project. Some development on Nordahl is near the SR-78 Freeway and will be dispersed there.

Current usage at their storefront site is about 150 persons. The Church plans to operate one service on Sunday morning and is closed during the AM and PM peak hours, but expects about 50 people to attend Wednesday night events after 7 pm. Trip generation during weekday peak hours is negligible, at one or two staff trips in each peak hour and is not expected to change by more than one trip. However, SANDAG (April 2002) Traffic Generators data estimates 45.4 daily trips with 5 percent in the AM peak hour, (2 trips) and 8 percent in the PM peak hour (4 trips). On Sunday morning, when the streets in the area are nearly empty, SANDAG (April 2002) projects 182 trips, or 91 in and 91 out, which will still have negligible impact on the streets. We estimate that a maximum of 30 to 60 vehicles will arrive and leave at about the same time on Sunday morning, since some will be involved in the Sunday School. Since the Calavo to Nordahl and turn left, 20 will go SW on Deodar, over the hill, to Montiel Road, and the rest will go down Deodar to Rock Springs. These trips will take place over at least a 20 minute period, so volumes on each exit street will average one vehicle per minute, which can easily be handled by the existing stop signs.

The only congested intersection in the area, Nordahl and Rock Springs, will receive no peak hour trips. It is congested only because of the unwarranted stop signs for Nordahl traffic.

In sum, weekday and Sunday volumes will have no impact on the local two-lane streets.

Recommendations for Traffic Mitigation

The proposed internal circulation is adequate. We have reviewed the parking layout and find it to be satisfactory in light of the terrain. We recommend standard turn radii for the driveway entrances at the road. The project's potential new trip generation during the weekday peak hour period is estimated to be zero or on trip, which will have no impact on any nearby streets or intersections.

On Sunday the peak activity is estimated to be one vehicle per minute, which is easily handled by all the existing two lane streets.

No street traffic mitigation measures are required.

Sight Distance

The driveway sight distances were surveyed by a licensed Land Surveyor, Slater Surveying and Land Planning, Escondido. The corner sight distance at both project driveways is provided in a separate letter from that firm.

Traffic Control Plan

We reviewed alternate routes for disposal of fill with the project Civil Engineer. He indicated that previously submitted fill estimates are high and may be cut in half. There appears to be only one feasible route from the site due to hills and intersection angles. We recommend that trucks turn from the site on Calavo through the gradual curve to downhill Deodar. At Rock Springs there is adequate width on Deodar and on Rock Springs for a wide turn left onto Seven Oaks Road, which is a frontage road for the Interstate and reaches El Norte Parkway interchange at I-15. Although trucks could also go NW on Calavo to Nordahl, the approaches at that intersection are too narrow for truck turns due to the hilly terrain.

Respectively submitted,
Daniel Bernstein & Associates

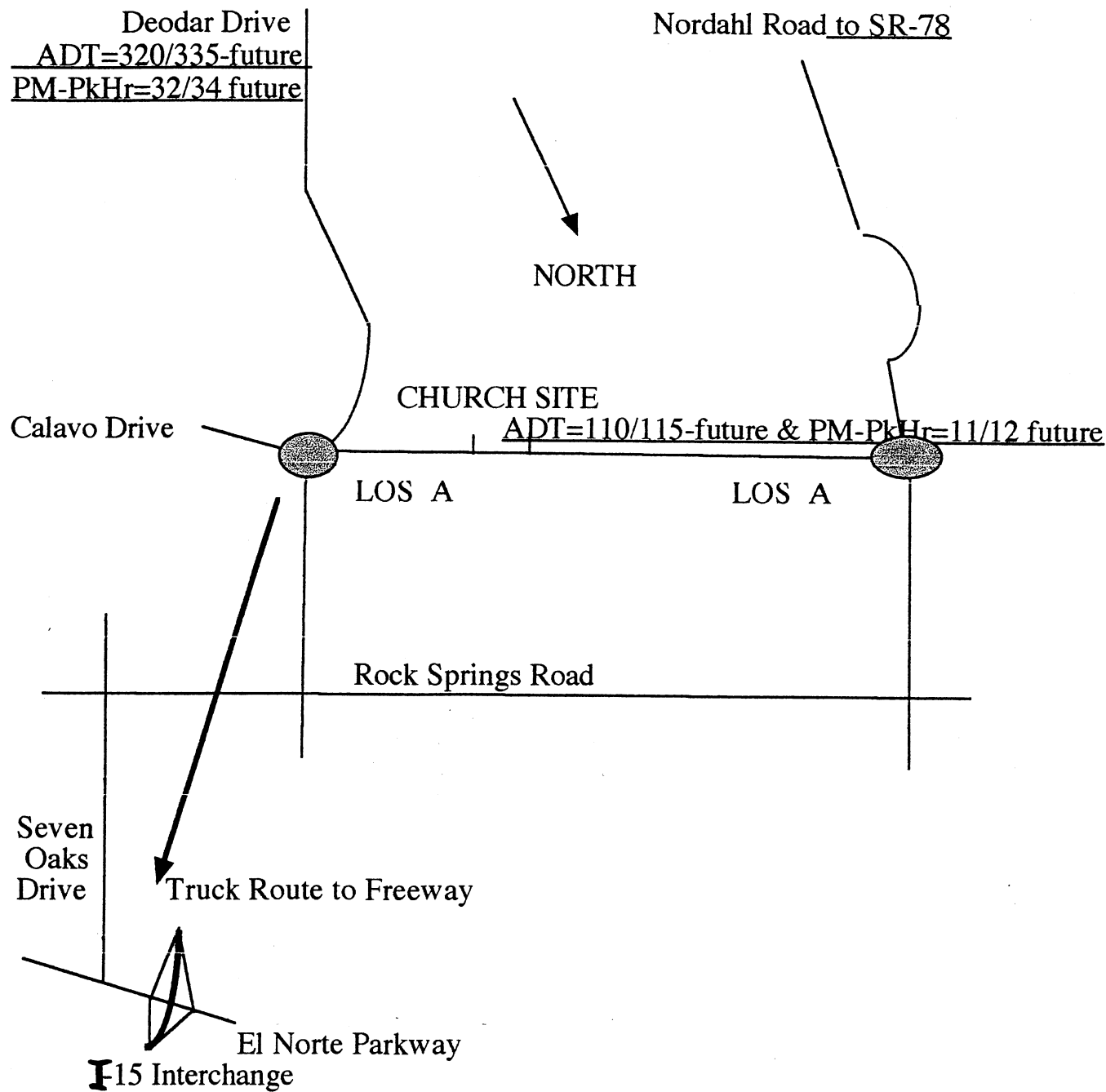
Daniel E. Benson, P.E C28813, A.I.C.P.
Principal
DEB:je

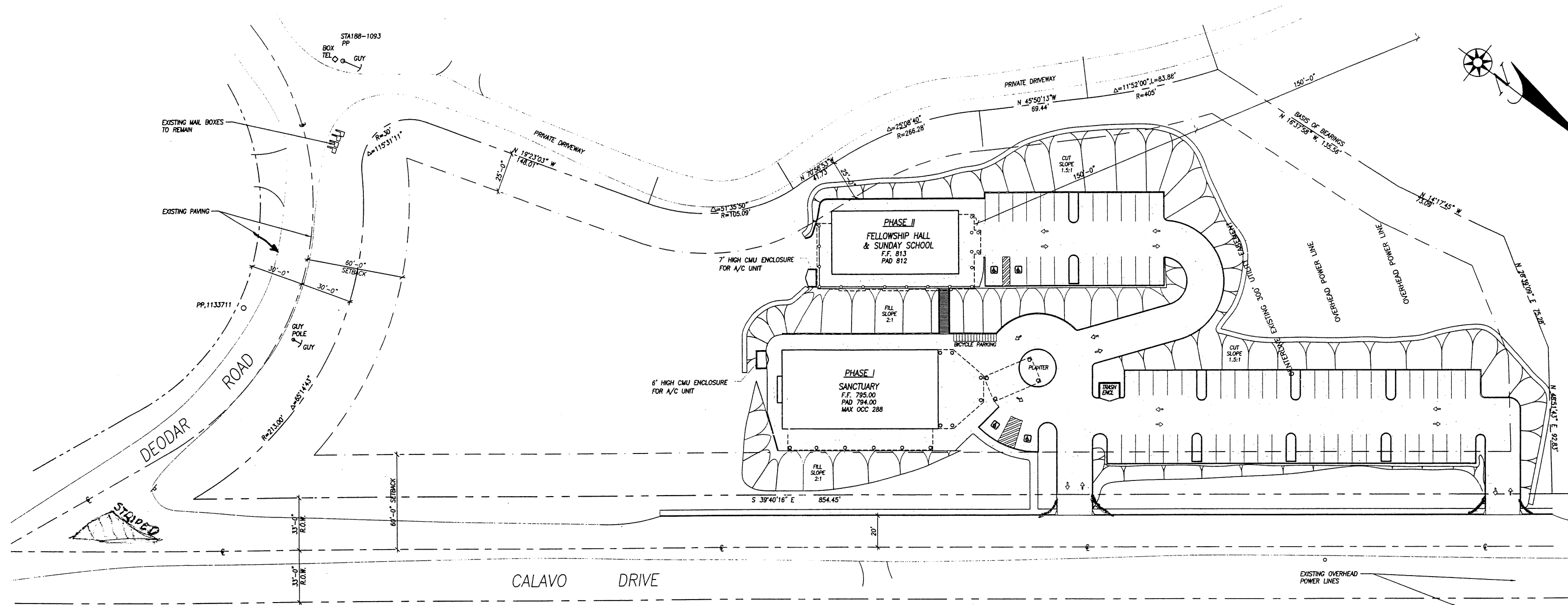
Cc: County of San Diego DPW-Escondido/San Marcos Area

APPENDIX

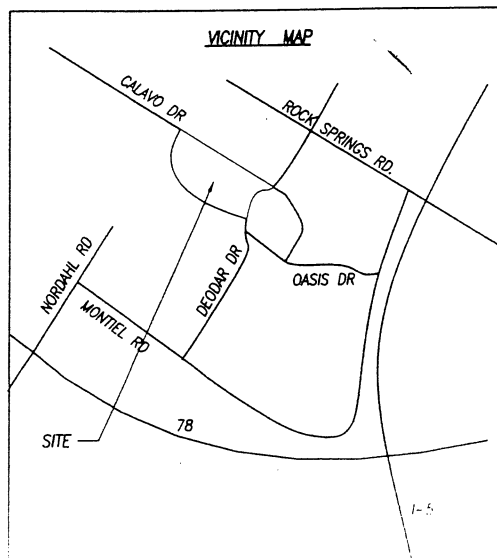
<u>Summary Table of Volume & PM Peak Hour LOS</u>	<u>Exist Wd&Sun</u>	<u>Future Wd&Sun</u>
Calavo Drive	11	12
Deodar Road	32	34
Calavo Drive and Deodar Road	A	A
Calavo Drive and Nordahl Road	A	A

Note: Level of Service estimates are based on observations and peak hour counts, which are well below LOS B volumes generated by the church will be staggered because of Sunday School and other group activities before and after church.





SITE PLAN
SCALE: 1"=30'-0"



PROJECT NOTES

TOPOGRAPHIC SURVEY MAP
OF A PORTION OF LOTS 7 AND LOT 8 IN BLOCK 6, OF MAP NO. 806, FILED IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, DECEMBER 21, 1895.
BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS SURVEY IS A PORTION OF THE FASTERLY LINE OF RECORD OF SURVEY MAP NO. 9368, AS SHOWN HEREIN, BEING: N 63°58' W.

BENCH MARK:
THE BENCH MARK FOR THIS SURVEY IS BM#429, CITY OF ESCONDIDO, @ ROCK SPRINGS ROAD AND PLEASANT HILLS ST, CHISLED SQUARE IN TOP OF CURB @ SIDEWALK UNDERDRAIN; ELEVATION=670.00

PHASE I:
SANCTUARY AND ALL ASSOCIATED GRADING.

PHASE II:
FELLOWSHIP HALL AND SUNDAY SCHOOL.

PROJECT DATA

SITE ADDRESS: CALAVO DRIVE AND DEODAR DRIVE
A.P.N.: 228- 110- 05
EXISTING ZONE: RR1
PROPOSED ZONE: RR1
LOT SIZE: 166,563 SQ. FT. /3.8 AC
BUILDING COVERAGE: 8,204 SQ. FT./5.2%
FLAT WORK & WALKWAYS: 8,996 SQ. FT./4.3%
PAVING: 29,790 SQ. FT./17.9%
NATURAL UNDISTURBED: 90,457 SQ. FT./54.3%
LANDSCAPING & SLOPES: 30,480 SQ. FT./18.3%
BUILDING SIZE- SANCTUARY: 5,040 SQ. FT.
BUILDING SIZE- FELLOWSHIP: 3,220 SQ. FT. - GROUND FLOOR
BUILDING SIZE- SUNDAY SCHOOL: 3,220 SQ. FT. - SECOND FLOOR
SEPTIC OR SEWER: SEPTIC
STORIES: CHURCH-1, FELLOWSHIP-2
TYPE CONSTRUCTION: V-NR
OCCUPANCY TYPE: A3
MAX. OCCUPANCY OF SANCTUARY 288 PEOPLE WITH FIXED SEATING
PROPOSED PARKING: 288/4 = 72 SPACES
68- STANDARD SPACES
4- HANDICAPPED SPACES
16- BICYCLE SPACES

SHEET INDEX	
SHEET NUMBER	DESCRIPTION
1	SITE PLAN & PROJECT DATA
2	STORMWATER MANAGEMENT PLAN
3	GRADING PLAN
4	LANDSCAPE CONCEPT PLAN
5	SANCTUARY FLOOR PLAN
6	SANCTUARY ELEVATIONS & MONUMENT SIGN
7	SANCTUARY ELEVATIONS
8	FELLOWSHIP HALL FIRST FLOOR PLAN
9	FELLOWSHIP HALL SECOND FLOOR PLAN
10	FELLOWSHIP HALL ELEVATIONS
11	FELLOWSHIP HALL ELEVATIONS

PROJECT OWNER:
CHRISTIAN CENTER HOUSE OF PRAYER
428 SUNRISE DRIVE
VISTA, CALIFORNIA, 92084
PASTOR: ALEXANDER G. BAZAN
(760) 945-3412

PROJECT ARCHITECT:
ENGINEERING DESIGN GROUP
2121 MONTIEL ROAD
SAN MARCOS, CALIFORNIA, 92069
(760) 839-7302
DONALD SPRANKLES

PROJECT CIVIL ENGINEER:
ENGINEERING DESIGN GROUP
2121 MONTIEL ROAD
SAN MARCOS, CALIFORNIA, 92069
(760) 839-7302
DONALD SPRANKLES

PROJECT SURVEYOR:
DRESSERHAUS SURVEYING
31034 VALLEY CENTER ROAD
SAN MARCOS, CALIFORNIA, 92082
(760) 749-8840, (760) 749-8730

APPENDIX C
Traffic Impact Study



Escondido/San Marcos

CENTRO CHRISTIANO

TRAFFIC IMPACT STUDY

DANIEL

BENSON

&

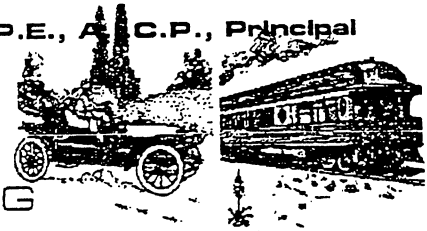
ASSOCIATES

**Daniel E. Benson, P.E., A.I.C.P., Principal
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Fullerton, CA 92832
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(760) 533-8211**

**December 2002
Appendix
March 2003**

**Daniel
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&
Associates**

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701 Mission Avenue, Suite D, Oceanside, CA 92054, (760) 633-8211
December 4, 2002

Engineering Design Group
Attention: Mr. Donald Sprankles, P.E.
2121 Montiel Road
San Marcos, California 92069

Douglas Eilar & Associates
Attention: Mr. Doug Eilar, Principal
321 No. Willowspiring Drive
Encinitas, California 92024

Re: Focused Traffic Report PO2-002-WN6614 Centro Chrisiano. Calavo and Deodar Drives

With reference to our recent discussions and pursuant to your request, *Daniel Benson & Associates* is pleased to submit this report on our professional transportation engineering services relative to the Escondido/San Marcos area Centro Christiano Church Focused Traffic Impact Analysis, in order to determine the traffic impact of building a church in the hilly, semi-rural Escondido/San Marcos area of San Diego County, just a few blocks northwest of the I-15 / SR-78 interchange. According to the proposed site plan, the building will access Calavo Drive between Nordahl Road and Deodar Drive, a block south of Rock Springs Road, and provide parking spaces exceeding the zoning ordinance requirement. The parcel is now vacant. Two new buildings will be constructed, including a Sanctuary that has a capacity of 288 fixed seats and a Fellowship Hall and Sunday School. Current usage at their storefront site is about 150 persons. The Church plans to operate one service on Sunday mornings (10 a.m. to 12 p.m.), one service on Sunday evenings (7 p.m. to 9 p.m.), but will be closed during the PM peak hours. There are two small weekly study groups planned on Wednesday and Friday evenings (7 p.m. to 9 p.m.). As a result of the proposed project, the County of San Diego has requested a focused traffic study of potential traffic impacts on access roadways, circulation, and nearby streets.

Findings

In summary, our Traffic Impact Analysis shows that existing traffic volumes at the Calavo Drive intersections with the Church driveway, Deodar Drive, and Nordahl Road in Escondido/San Marcos are minimal and Calavo and Deodar will continue to operate at Level of Service A. During the PM peak hour from 5:30 to 6:30 PM, our counts showed that only 32 vehicles operated in either direction on Deodar and 11 vehicles used Calavo past the proposed church driveway. These two-lane streets have limited paved capacity but will not be significantly impacted by the development, with continued operation at Level of Service A after completion, considering that community growth in this hilly area is expected to be limited to five per cent, with no developments anticipated, other than a few new custom houses. Using the standard ratio of Average Daily Traffic (ADT) to peak hour volumes of 10, existing ADT is estimated to be 320 on Deodar and 110 on Calavo, not too different from the County's extrapolation of 212 (Mar 22 letter).

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Sight Distance

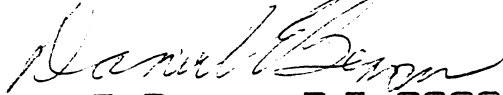
Of the proposed driveways on Calavo, the main driveway will be on top of the rise in the street and for a 25 to 35 mph street it will have the full 620 feet SE to Deodar and 815 feet NW to the rise beyond the property line. However the secondary driveway would have 352 feet NW to the rise beyond the property line and 560 feet SE to the rise at the main driveway. These distances were surveyed by Slater Surveying and Land Planning, Escondido. Therefore it is recommended that the secondary driveway be used on Easter and other Sundays when an usher or other church member can be there to direct traffic after church.

Traffic Control Plan

We reviewed alternate routes for disposal of fill with the project Civil Engineer. He indicated that previously submitted fill estimates are high and may be cut in half. There appears to be only one feasible route from the site due to hills and intersection angles. We recommend that trucks turn from the site on Calavo through the gradual curve to downhill Deodar. At Rock Springs there is adequate width on Deodar and on Rock Springs for a wide right turn if needed. Trucks would then pass under the I-15 and immediately turn left onto Seven Oaks Road, which is a frontage road for the Interstate and reaches El Norte Parkway interchange at I-15. Although trucks could also go NW on Calavo to Nordahl, the approaches at that intersection are too narrow for truck turns due to the hilly terrain.

Respectfully submitted,

Daniel Benson & Associates



Daniel E. Benson, P.E. C28613, A.I.C.P.,

Principal

DEB:je

cc: County of San Diego DPW-Escondido/San Marcos Area

Summary Table of PM Peak Hour LOS**Exist Wd&Sun****Future WD&Sun**

Calavo Drive and Deodar Drive

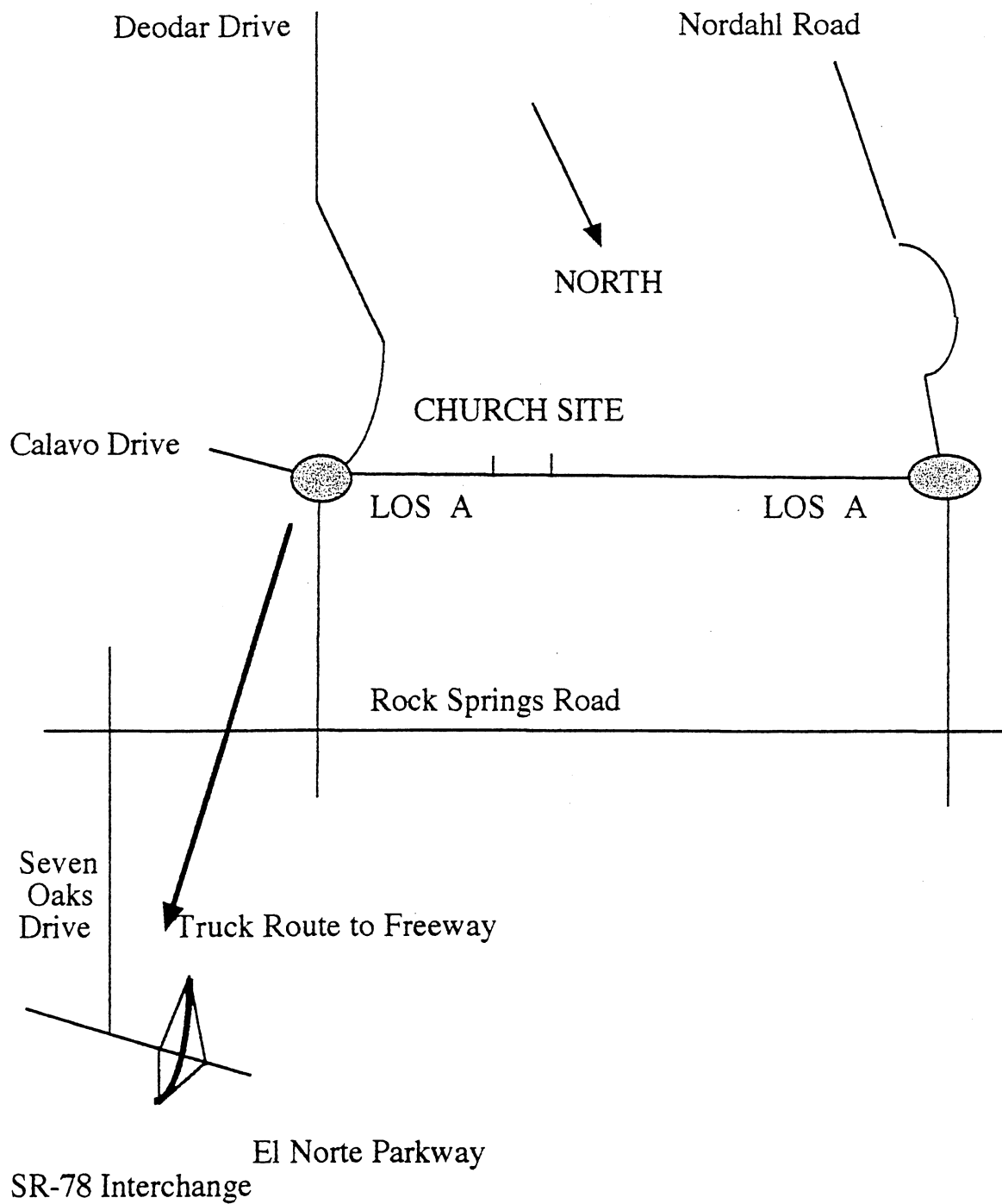
A

A

Calavo Drive and Nordahl Road

A

A



Date 11-26-02

Day Tue PM

15 MIN
PERIOD

5:30

6:30

PM

PBAR

HOVR

BASED
ON

4:30-6:30
COUNT

DEODAR
DONT

32 x 10 = 320
AD

EB

From
West

no truck
2 mobile home

Calavo

S3
from
North

11
ADT
x10

4

7

5 1 1

Proposed
Church

WB
From
East

30

19

2
17

11

21

Deodar
up

9
1

11

1 3

4

2

6

20/10

NB
from
South
x10
60 ADT

NB

Calavo

Daniel Benson & Associates